

PCT

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INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

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Applicant's or agent's file reference 22188/04256	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/PEA/416)	
International application No. PCT/US 03/08578	International filing date (day/month/year) 20.03.2003	Priority date (day/month/year) 21.03.2002
International Patent Classification (IPC) or both national classification and IPC B05B15/02		
Applicant NORDSON CORPORATION et al.		



- This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
- This REPORT consists of a total of 8 sheets, including this cover sheet.

☐ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the opinion
- II ☐ Priority
- III ☒ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☒ Lack of unity of invention
- V ☒ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

Date of submission of the demand 22.10.2003	Date of completion of this report 16.08.2004
Name and mailing address of the international preliminary examining authority:  European Patent Office - P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk - Pays Bas Tel. +31 70 340 - 2040 Tx: 31 651 epo nl Fax: +31 70 340 - 3016	Authorized Officer Barré, V Telephone No. +31 70 340-2987 

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I. Basis of the report

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

Description, Pages

1-11 as originally filed

Claims, Numbers

1-30 as originally filed

Drawings, Sheets

1/7-7/7 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
 - ☐ the language of publication of the international application (under Rule 48.3(b)).
 - ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).
3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:
- ☐ contained in the international application in written form.
 - ☐ filed together with the international application in computer readable form.
 - ☐ furnished subsequently to this Authority in written form.
 - ☐ furnished subsequently to this Authority in computer readable form.
 - ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
 - ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.
4. The amendments have resulted in the cancellation of:
- ☐ the description, pages:
 - ☐ the claims, Nos.:
 - ☐ the drawings, sheets:

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5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).
- (Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)*

6. Additional observations, if necessary:

III. Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

1. The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non-obvious), or to be industrially applicable have not been examined in respect of:
- ☐ the entire international application,
 - ☒ claims Nos. 8-20, 23-30
- because:
- ☐ the said international application, or the said claims Nos. relate to the following subject matter which does not require an international preliminary examination (specify):
 - ☐ the description, claims or drawings (*indicate particular elements below*) or said claims Nos. are so unclear that no meaningful opinion could be formed (*specify*):
 - ☐ the claims, or said claims Nos. are so inadequately supported by the description that no meaningful opinion could be formed.
- ☒ no international search report has been established for the said claims Nos. 8-20, 23-30
2. A meaningful international preliminary examination cannot be carried out due to the failure of the nucleotide and/or amino acid sequence listing to comply with the standard provided for in Annex C of the Administrative Instructions:
- ☐ the written form has not been furnished or does not comply with the Standard.
 - ☐ the computer readable form has not been furnished or does not comply with the Standard.

IV. Lack of unity of invention

1. In response to the invitation to restrict or pay additional fees, the applicant has:
- ☐ restricted the claims.
 - ☐ paid additional fees.
 - ☐ paid additional fees under protest.
 - ☒ neither restricted nor paid additional fees.
2. ☐ This Authority found that the requirement of unity of invention is not complied with and chose, according to Rule 68.1, not to invite the applicant to restrict or pay additional fees.
3. This Authority considers that the requirement of unity of invention in accordance with Rules 13.1, 13.2 and 13.3 is
- ☐ complied with.

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☐ not complied with for the following reasons:

4. Consequently, the following parts of the international application were the subject of international preliminary examination in establishing this report:

☐ all parts.

☒ the parts relating to claims Nos. 1-7, 21, 22 .

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	3-7, 22
	No: Claims	1, 2, 21
Inventive step (IS)	Yes: Claims	
	No: Claims	1-7, 21-22
Industrial applicability (IA)	Yes: Claims	1-7, 21-22
	No: Claims	

2. Citations and explanations

see separate sheet

Re Item III

See Item IV

Re Item IV

The prior art US5759271 (document D1) discloses a spray booth with powder spray nozzles and compressed air nozzles designed to blow off the powder overspray from the powder spray nozzle.

First invention: Claims 1-7 21-22.

The first invention discloses an apparatus for removing powder overspray from a powder spray gun. It differs from the prior art in that it is featuring a cleaning device in fluid communication with a source of negative pressure.

The STF (Special Technical Feature) in the sense of Rule 13 PCT of the first invention is considered to be the feature of claim 1:

- a cleaning device positioned with respect to an exterior surface of a spray gun,
- said cleaning device in fluid communication with a source of negative pressure.

The problem solved thereby is how to clean the nozzle without dispersing the powder, and how to collect the powder at the same time.

Second invention: Claims 8-10, 23-24

The second invention discloses an apparatus for cleaning powder off a spray gun. Its STF is considered to be a cleaning device provided with wiping or brushing elements.

The problem to be solved by this feature is how to remove the overspray powder from the spray gun.

Third invention: Claims 11-13, 25

The third invention discloses an apparatus for removing powder overspray from a powder spray gun. Its STF is considered to be a cryogenic fluid in contact with the spray gun.

The problem to be solved by this feature is considered to be an effective cleaning without damaging the surface.

Fourth invention: Claims 14,15,26,27

The fourth invention discloses an apparatus for removing powder from a spray gun. Its STF is considered to be bringing charged particle into contact with the gun's housing.

The problem to be solved by this feature is how to remove powder from the spray gun without the use of a gas.

Fifth invention: Claims 16-17, 28-29

The fifth invention discloses a powder spray gun. Its STF are considered to be:

- an external housing made of porous material,
- a pressurized air source.

Sixth invention: Claims 18-20, 30

The sixth invention discloses a powder spray gun. Its STF are considered to be:

- an external housing made of flexible material,
- a pressurized air source.

The problem to be solved by this feature is how to remove powder overspray from the spray gun housing exterior surface without involving positioning of the spray gun with respect to external powder cleaning apparatuses.

The common concept linking all the independent claims is to provide means to clean a powder spray gun. However this concept is known, see D1, and therefore cannot be considered as a common inventive concept in the sense of Rule 13.1 PCT.

There are no common special technical features in the claimed inventions. These features do not correspond, as they solve different unrelated problems. Since common or corresponding technical features between the different inventions are lacking, a technical relationship involving those features cannot be present and the different inventions are not linked by a single general inventive concept. The application, hence, does not meet the requirements of unity of invention as defined in Rule 13 PCT

The problem to be solved by this feature is how to prevent powder overspray on the

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housing exterior surface.

Re Item V

Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

Reference is made to the following documents:

- D1: US-A-5 346 553 (PINGEL JOACHIM) 13 September 1994 (1994-09-13)
- D2: DE 39 33 745 A (HESTERMANN GERHARD) 11 April 1991 (1991-04-11)
- D3: US-A-5 759 271 (BUSCHOR KARL) 2 June 1998 (1998-06-02)

1. The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claim 1 is not new in the sense of Article 33(2) PCT.

The document D2 (DE3933745) is regarded as being the closest prior art to the subject-matter of claim 1, and discloses (the references in parentheses applying to this document):

An apparatus for removing powder overspray from a powder spray gun assembly used in a powder spray application system, comprising:

- at least one cleaning device (20) that can be positioned with respect to an exterior surface (14) of a powder spray gun (13) to remove powder from the spray gun,
- said at least one cleaning device (20, 63) being in fluid communication with a source of negative pressure (23).

The subject matter of claim 1 is thus not new.

2. The subject matter of claim 2 is also known from the same document D2 and is thus not new.

3. The subject matter of claims 3-7 relates to the addition of elements for wiping, sanding, or brushing.

The features of claims 3-7 are merely one of several straightforward possibilities from which the skilled person would select, in accordance with circumstances, without the

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exercise of inventive skill, in order to remove powder sticking on a powder spray booth element (see e.g. D1).

4. The subject matter of independent method claim 21 is considered to lack novelty for substantially the same reason as for claim 1.

5. The subject matter of claim 22 is considered to lack inventiveness for substantially the same reason as for claim 3

6. Independent claims 1 and 21 are not in the two-part form in accordance with Rule 6.3(b) PCT, which in the present case would be appropriate, with those features known in combination from the prior art (document D2) being placed in the preamble (Rule 6.3(b)(i) PCT) and with the remaining features being included in the characterising part (Rule 6.3(b)(ii) PCT).

Independent claims 1 and 21 should therefore be redrafted accordingly. If, however, the applicant is of the opinion that the two-part form would be inappropriate, then reasons therefor should be provided in the letter of reply. In addition, the applicant should ensure that it is clear from the description which features of the subject-matter of claims 1 and 21 are already known in combination from the document D2 (see the PCT Guidelines, III-2.3a).

7. In order to facilitate the examination of the conformity of the amended application with the requirements of Article 34(2)(b) PCT, the applicant is requested to clearly identify the amendments carried out, no matter whether they concern amendments by addition, replacement or deletion, and to indicate the passages of the application as filed on which these amendments are based (see also Rule 66.8(a) PCT).

If the applicant regards it as appropriate these indications could be submitted in handwritten form on a copy of the relevant parts of the application as filed.

8. The features of the claims are not provided with reference signs placed in parentheses (Rule 6.2(b) PCT).